

Claims

[c1] What is claimed is:

1. A symmetrical liquid crystal display panel comprising:
a substrate having a display area positioned on a central
part of the substrate, and a peripheral circuit area posi-
tioned on a surface of the substrate;
at least a source driver IC positioned on a central part of
the peripheral circuit area;
a flexible circuit board positioned at the outside perime-
ter of the peripheral circuit area on the same side as the
source driver IC, the flexible circuit board having at least
an extension portion comprising at least a gate driver IC
positioned on a central part of the extension portion;
and
a plurality of conductive wires connected to the gate
driver IC, the source driver IC, and the display area of the
substrate.

[c2] 2. The symmetrical liquid crystal display panel of claim 1
wherein the liquid crystal display panel is an amorphous
silicon thin film transistor liquid crystal display panel.

[c3] 3. The symmetrical liquid crystal display panel of claim 1
wherein the substrate is a rectangular glass substrate.

- [c4] 4.The symmetrical liquid crystal display panel of claim 1 wherein the symmetrical liquid crystal display panel is applied to a cellular phone or a smart phone.
- [c5] 5.The symmetrical liquid crystal display panel of claim 1 wherein the flexible circuit board comprises a flexible printed circuit (FPC) board, a flexible copper clad laminate (FCCL), or a tape carrier package (TCP).
- [c6] 6.A liquid crystal display panel comprising:
 - a substrate having a display area and a peripheral circuit area positioned on a surface of the substrate;
 - at least a first driver IC positioned on the peripheral area of the substrate;
 - a flexible circuit board positioned at the outside perimeter of the peripheral circuit area on the same side as the first driver IC, the flexible circuit board having an extension portion comprising at least a second driver IC; and
 - a plurality of conductive wires connected to the first driver IC, the second driver IC, and the display area of the substrate.
- [c7] 7.The liquid crystal display panel of claim 6 wherein the liquid crystal display panel is an amorphous silicon thin film transistor liquid crystal display panel.
- [c8] 8.The liquid crystal display panel of claim 6 wherein the

first driver IC is a source driver IC and the second driver IC is a gate driver IC.

- [c9] 9. The liquid crystal display panel of claim 6 wherein the substrate is a rectangular glass substrate.
- [c10] 10. The liquid crystal display panel of claim 9 wherein the source driver IC is positioned on the central part of the peripheral circuit area that is on a longer side of the substrate, the gate driver IC is positioned on the central part of the flexible circuit board, and the display area is positioned on the central part of the substrate such that the liquid crystal display panel is a symmetrical liquid crystal display panel.
- [c11] 11. The liquid crystal display panel of claim 10 wherein the symmetrical liquid crystal display panel is applied to a cellular phone or a smart phone.
- [c12] 12. The liquid crystal display panel of claim 6 wherein the flexible circuit board comprises a flexible printed circuit (FPC) board, a flexible copper clad laminate (FCCL), or a tape carrier package (TCP).